

Subject: FW: P 031825Z JUN 11 NAVSURFWARCEN SHIPSYSENGSTA PHILADELPHIA PA  
PA  
IN SERVICE ENGINEERING ADVISORY NO. 011-11, HALON AND HFP ACTUA

-----Original Message-----

From: NAVSURFWARCEN SHIPSYSENGSTA PHILADELPHIA PA  
[mailto:postmaster@oix.navy.mil]  
Sent: Friday, June 03, 2011 15:36  
To: NAVSURFWARCEN SHIPSYSENGSTA PHILADELPHIA PA; COMNAVAIRFOR  
SAN DIEGO CA; COMNAVAIRFOR SAN DIEGO CA; CNSP MESSAGE TRAFFIC  
NREMS; COMSUBPAC PEARL HARBOR HI  
Cc: SHIPSUPPACT NORFOLK DET NAPLES IT; SHIPSUPPACT NORFOLK DET  
BAHRAIN; PEO CARRIERS WASHINGTON DC; NAVSEALOGCEN  
MECHANICSBURG PA; NAVSHIPYD NORFOLK VA; COMNAVSEASYS  
WASHINGTON DC; SOUTHWEST RMC SAN DIEGO CA; SOUTHEAST RMC  
MAYPORT FL; PRLH AMHS SYSTEM ACCOUNT; PRLH AMHS SYSTEM  
ACCOUNT; MARMC-DMDS; Young, Linda CIV Code 1140, Code 1141.3; Young, Linda  
CIV Code 1140, Code 1141.3; COMSC WASHINGTON DC; CENSURFCOMBATSYS  
DAHLGREN VA; CENNAVENGINEERING NORFOLK VA; 2010 INCOMING MSGS;  
NAVSHIPREPFAC AND JAPAN RMC YOKOSUKA JA; NAVSHIPREPFAC AND  
JAPAN RMC DET SASEBO JA; SUPSHIP BATH ME  
Subject: P 031825Z JUN 11 NAVSURFWARCEN SHIPSYSENGSTA PHILADELPHIA  
PA IN SERVICE ENGINEERING ADVISORY NO. 011-11, HALON AND HFP ACTUA

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-----OFFICIAL INFORMATION DISPATCH FOLLOWS-----

PAAUZYUW RUEOMFB2556 1541852-UUUU--RUOIABD RUOIABE.  
ZNR UUUUU ZUI RUEOMCH6093 1541853  
P 031825Z JUN 11 PSN 766325K29  
FM NAVSURFWARCEN SHIPSYSENGSTA PHILADELPHIA PA  
TO RUOIABE/COMNAVAIRLANT NORFOLK VA  
RUOIABD/COMNAVAIRPAC SAN DIEGO CA  
RHHMDBA/COMSUBPAC PEARL HARBOR HI  
ZEN/COMNAVSURFLANT NORFOLK VA  
ZEN/COMNAVSURFPAC SAN DIEGO CA  
INFO RUCBCLF/COMUSFLTFORCOM NORFOLK VA  
RHOVZCH/COMPACFLT PEARL HARBOR HI  
ZEN/CENNAVENGINEERING NORFOLK VA  
ZEN/CENSURFCOMBATSYS DAHLGREN VA  
ZEN/PRESINSURV VIRGINIA BEACH VA  
ZEN/COMNAVSAFECEN NORFOLK VA  
ZEN/SUPSHIP BATH ME  
ZEN/SUPSHIP GULF COAST MS  
ZEN/SUPSHIP NEWPORT NEWS VA  
ZEN/NAVSHIPYD AND IMF PEARL HARBOR HI  
ZEN/NAVSHIPYD AND IMF PUGET SOUND DET BOSTON MA  
ZEN/NAVSHIPYD AND IMF PUGET SOUND WA  
ZEN/NAVSHIPYD NORFOLK VA  
ZEN/COMNAVRMC NORFOLK VA  
ZEN/SHIPSUPPACT NORFOLK DET BAHRAIN  
ZEN/SHIPSUPPACT NORFOLK DET NAPLES IT  
ZEN/SHIPSUPPACT NORFOLK VA  
ZEN/NAVSHIPREPFAC AND JAPAN RMC DET SASEBO JA  
ZEN/NAVSHIPREPFAC AND JAPAN RMC YOKOSUKA JA

ZEN/SOUTHEAST RMC MAYPORT FL  
ZEN/SOUTHWEST RMC SAN DIEGO CA  
ZEN/COMNAVSEASYSKOM WASHINGTON DC  
ZEN/PEO CARRIERS WASHINGTON DC  
ZEN/COMSC WASHINGTON DC  
ZEN/COMSUBLANT NORFOLK VA  
ZEN/NAVSEALOGCEN MECHANICSBURG PA

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SECTION 1 OF 2

QQQQ

SUBJ: IN SERVICE ENGINEERING ADVISORY NO. 011-11, HALON AND HFP  
ACTUA

TION TUBING INSTALLATION REQUIREMENTS

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PTTUZYUW RULSBMS 1541825-UUUU--RHMCSUU.

ZNR UUUUU

P 031825Z JUN 11 ZYB

FM NAVSURFWARREN SHIPSYSENGSTA PHILADELPHIA PA

TO COMNAVSURFLANT NORFOLK VA//N43/N7//

COMNAVSURFPAC SAN DIEGO CA//N43/N7//

COMNAVAVIRLANT NORFOLK VA//N43/N7//

COMNAVAVIRPAC SAN DIEGO CA//N43/N7//

COMSUBPAC PEARL HARBOR HI//N43/N7//

INFO CENNAVENGINEERING NORFOLK VA//N7//

CENSURFCOMBATSYS DAHLGREN VA//N7//

PRESINSURV VIRGINIA BEACH VA//00//

COMNAVSAFECEN NORFOLK VA//30//

COMUSFLTFORCOM NORFOLK VA//N43//

COMPACFLT PEARL HARBOR HI//N43//

SUPSHIP BATH ME//262/151//

SUPSHIP GULF COAST MS//263/150/154/117/157//

SUPSHIP NEWPORT NEWS VA//151/152/200//

NAVSHIPYD AND IMF PEARL HARBOR HI//200//

NAVSHIPYD AND IMF PUGET SOUND DET BOSTON MA

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NAVSHIPYD AND IMF PUGET SOUND WA//270//

NAVSHIPYD NORFOLK VA//267//

COMNAVRMC NORFOLK VA//00//

SHIPSUPPACT NORFOLK DET BAHRAIN//210//

SHIPSUPPACT NORFOLK DET NAPLES IT//210/

SHIPSUPPACT NORFOLK VA//215//

NAVSHIPREPFAC AND JAPAN RMC DET SASEBO JA//200//

NAVSHIPREPFAC AND JAPAN RMC YOKOSUKA JA//200//

SOUTHEAST RMC MAYPORT FL//200/300/900//

SOUTHWEST RMC SAN DIEGO CA//200/300/900//

COMNAVSEASYSKOM WASHINGTON DC//05P5/05P2/05V1/05S2/04RS//

COMNAVSEASYSKOM WASHINGTON

DC//05D5/21FT/PMS400F/SURFMEPP/PMS470//

PEO CARRIERS WASHINGTON DC//PMS312/PMS312E//

COMSC WASHINGTON DC//N4/N7/PM2//

COMSUBLANT NORFOLK VA//N43//

NAVSEALOGCEN MECHANICSBURG PA//05315/05316//

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SECINFO/U/-//

MSGID/GENADMIN/NSWCCD-SSES 668/MRN0369//

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SUBJ/IN SERVICE ENGINEERING (ISE) ADVISORY NO. 011-11, HALON AND HFP  
ACTUATION TUBING INSTALLATION REQUIREMENTS AND IN SERVICE  
INSPECTION

CRITERIA//

REF/A/DESC:MSG/COMNAVSURFOR/110004ZMAY2010/-/NOTAL//

REF/B/DESC:DOC/NAVSEA/25MAY1991//

REF/C/DESC:DOC/NAVSEA/25OCT1990//

REF/D/DESC:DOC/NAVSEA/15JAN2008//

REF/E/DESC:DOC/NAVSEA/30SEP2009//

REF/F/DESC:DOC/NAVSEA/31DEC1994//

REF/G/DESC:DOC/NAVSEA/31DEC2011//

REF/H/DESC:DOC/NAVSEA/15MAR2011//

REF/I/DESC:DOC/NAVSEA/10JUL2003//

REF/J/DESC:DOC/NAVSEA/31MAR2008//

REF/K/DESC:DOC/NAVSEA/01DEC2010//

REF/L/DESC:DOC/NAVSEA/01DEC2010//

REF/M/DESC:DOC/NAVSEA/01DEC2009//

REF/N/DESC:DOC/NAVSEA/01JAN2010//

REF/O/DESC:DOC/NAVSEA/02JUN2011//

NARR/REF A IS DAMAGE CONTROL READINESS ADVISORY (DCRA) 2010-05,  
HALON/HFP CO2 ACTUATION FLEXIBLE CONNECTIONS. REF B IS NAVSEA  
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STANDARD DRAWING 803-6397405, HALON ACTUATION TUBING ASSEMBLY.

REF

C IS NAVSEA LETTER 9555/SER 56Y51/163, SUBJ: REVISION OF DESIGN  
GUIDANCE FOR HALON SYSTEM RELIABILITY IMPROVEMENT EQUIPMENT.

REF D

IS NAVAL SHIPS TECHNICAL MANUAL, (NSTM) CHAPTER 505, PIPING SYSTEMS,  
S9086-RK-STM-010 REV 04. REF E IS TECHNICAL MANUAL (TM)  
S9555-A6-MMA-010 REV 05, FIRE EXTINGUISHING SYSTEM, HALON 1301;  
DESCRIPTION, OPERATION, AND MAINTENANCE. REF F IS TM  
S9555-AT-MMA-010 REV 02, HALON 1301 FIXED FIRE EXTINGUISHING SYSTEM;  
DESCRIPTION, OPERATION, AND MAINTENANCE. REF G IS TM  
S9555-ES-MMC-010, HEPTAFLUOROPROPANE (HFP) FIXED FLOODING FIRE  
EXTINGUISHING SYSTEM EQUIPMENT; DESCRIPTION, OPERATION, AND  
MAINTENANCE INSTRUCTIONS. REF H IS TM S9555-DN-MMC-010,  
HEPTAFLUOROPROPANE (HFP) FIRE EXTINGUISHING SYSTEM; OPERATION,  
MAINTENANCE AND REPAIR INSTRUCTIONS WITH PARTS LIST. REF I IS TM  
S9555-D6-MMO-010, HEPTAFLUOROPROPANE (HFP) FIRE EXTINGUISHING  
SYSTEM

FOR CVN76. REF J IS TM S9555-EQ-MMO-010, FIRE EXTINGUISHING SYSTEM,  
HEPTAFLUOROPROPANE (HFP) FOR CVN 77; MAINTENANCE MANUAL. REF K

IS

SURFACE SHIP PLANNED MAINTENANCE SYSTEM (PMS) MAINTENANCE

INDEX

PAGE (MIP) 5553/026. REF L IS PMS MAINTENANCE REQUIREMENT CARD (MRC)

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8KJX (M-1R). REF M IS PMS MRC C9RB (M-2R). REF N IS NSTM CH 555

VOL 1, SURFACE SHIP FIREFIGHTING, S9086-S3-STM-010 REV 13. REF O IS

EMAIL FROM NAVSEA 05P5/MARY HUNSTAD TO NSWCCD-SSES 668/MARK

HAMPSON

PROVIDING NAVSEA TECHNICAL WARRANT HOLDER FOR FIRE PROTECTION  
SYSTEMS

CONCURRENCE WITH THIS ADVISORY.//

POC/MR. MARK HAMPSON/CIV/NSWCCD-SSES 668/LOC:PHILADELPHIA PA

/TEL:215-897-1257/TEL:DSN:443-1257/EMAIL:MARK.HAMPSON@NAVY.MIL//  
GENTEXT/REMARKS/1. PURPOSE: TO PROVIDE REVISED HALON/HFP  
ACTUATION

TUBING INSTALLATION REQUIREMENTS AND IN SERVICE INSPECTION  
CRITERIA.

2. BACKGROUND:

A. 1/4 INCH TUBING ASSEMBLIES CONNECT ALL COMPONENTS IN THE HALON  
AND HEPTAFLUOROPROPANE (HFP) ACTUATION SYSTEMS. THESE TUBING  
ASSEMBLIES CONFORM TO REF B. TUBING ASSEMBLIES CAN BE ORDERED  
UNDER  
NSN 9B 4210-01-336-9267, ALTERNATELY LIMITED QUANTITIES ARE  
AVAILABLE UNDER NICN 2S 4210-LL-HAL-6844. TUBING ASSEMBLIES MAY NOT  
BE MANUFACTURED LOCALLY OR BY HAND. THE TYPE AND SIZE OF WELDS  
IN

REF B REQUIRE THE USE OF AN AUTOMATED WELDING PROCESS.

B. REF A ADDRESSED TO SURFACE FORCE SHIPS DIRECTED THAT WHEN  
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INSPECTING HALON/HFP CO2 ACTUATION TUBING, SHIPS SHALL REFER TO  
THE

FINAL SECTION OF 2

QQQQ

CURRENT SHIP'S DRAWINGS FOR THE INSPECTION CRITERIA AND TO UTILIZE  
THOSE CRITERIA TO ACCEPT OR REJECT THE HALON ACTUATION TUBING.  
MANY OF THE SHIPS RESPONDING TO REF A IDENTIFIED THAT INSTALLATION  
PAGE 03 RUEOMFB2557 UNCLAS

DRAWINGS OF THE HALON ACTUATION TUBING WERE NOT AVAILABLE OR  
THE

ONLY GUIDANCE WAS IN 20-YEAR-OLD SHIPALT RECORDS. WHEN APPLYING  
THE

CRITERIA OF AVAILABLE SHIPALT RECORDS OR REF C, MANY OF THE TUBING  
ASSEMBLIES WERE IDENTIFIED AS OUT OF SPECIFICATION. A REVIEW OF  
THE

REQUIREMENTS FOR IN-SERVICE TUBING ASSEMBLIES HAS BEEN  
COMPLETED.

NAVSEA HAS DETERMINED THAT THE WELD AREA OF THE TUBING  
ASSEMBLIES

EXCEEDS THE STRENGTH OF THE TUBING MATERIAL, AND THAT THE  
DUCTILITY

OF THE TUBING ALLOWS FOR A RELAXATION OF THE IN-SERVICE INSPECTION  
CRITERIA.

3. RECOMMENDED ACTIONS:

A. FOR NEW AND REPLACEMENT INSTALLATIONS ON IN-SERVICE SHIPS,  
INSTALL ACTUATION TUBING AS FOLLOWS:

1) TUBING ASSEMBLIES SHALL HAVE AT LEAST ONE COMPLETE LOOP WHEN  
INSTALLED. THIS LOOP NEED NOT BE ONE CONTINUOUS CIRCLE, BUT MAY  
BE

PROVIDED THROUGHOUT THE ENTIRE INSTALLED LENGTH.

2) REF B REQUIRED THE LOOP TO HAVE A BEND RADIUS OF 2 INCHES  
MINIMUM

(4 INCH DIAMETER). THE REVISED BEND RADIUS OF THE TUBING ASSEMBLY  
SHALL BE A MINIMUM OF 1-1/4 INCHES (2-1/2 INCH DIAMETER) MEASURED AT  
CENTERLINE OF TUBING. THE 1-1/4 INCH BEND RADIUS MEETS THE

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REQUIREMENT OF REF D FOR BENDING OF TUBING TO A BEND RADIUS OF  
FIVE

DIAMETERS OR MORE. IT IS RECOMMENDED THAT A TUBING BENDER OR A

SECTION OF 2-1/2 INCH DIAMETER OR LARGER PIPE BE USED AS A FORM TO BEND THE TUBE AROUND, TO ENSURE THAT THE TUBE BEND RADIUS IS MORE THAN THE REQUIRED 1-1/4 INCH MINIMUM. BEND TUBING CAREFULLY TO

AVOID ACCIDENTALLY MAKING A SHARP BEND AS THE TUBING MAY BUCKLE BY

EXCESSIVE BENDING STRESS.

3) BENDS SHALL NOT BE WITHIN 2 INCHES OF THE END IN ORDER TO PROVIDE

AN ALLOWANCE FOR BENDING DURING APPLICABLE MAINTENANCE ACTIONS THAT

OCCUR IN SERVICE.

B. FOR TUBING ASSEMBLIES ALREADY INSTALLED ON IN-SERVICE SHIPS, THE FOLLOWING INSPECTION REQUIREMENTS ARE APPLICABLE AND SUPERSEDE REF N

PARAGRAPH 555-3.3.2.3:

1) TUBING ASSEMBLIES SHALL HAVE AT LEAST ONE COMPLETE LOOP WHEN INSTALLED. THIS LOOP NEED NOT BE ONE CONTINUOUS CIRCLE, BUT MAY BE

PROVIDED THROUGHOUT THE ENTIRE INSTALLED LENGTH.

2) THE BEND RADIUS OF THE TUBING ASSEMBLY SHALL BE AT LEAST 1-1/4 INCH (2-1/2 INCH DIAMETER) MEASURED AT CENTERLINE OF TUBING.

3) BENDS IN THE TUBING ASSEMBLY SHOULD START NO CLOSER THAN 1/4 INCH

FROM THE WELDED JOINT AND SHALL NOT EXCEED THE OVERALL BEND RADIUS

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OF THE TUBING ASSEMBLY. WHERE BENDS START WITHIN ZERO TO 1/4 INCH FROM THE END OF THE WELDED JOINT, AN OFFSET IN THE TUBING IS PERMITTED AS FOLLOWS: INSTALLED TUBING ASSEMBLY OFFSET FROM A STRAIGHTLINE AXIS ALONG THE TUBING ASSEMBLY SHALL NOT EXCEED 1/4 INCH AS MEASURED ONE INCH FROM THE END OF THE TUBING WELD.

4) THE FOLLOWING MEASURING METHOD WILL INSURE THAT THE MINIMUM 1-1/4

INCH BEND RADIUS IS MET NEAR THE WELD AND TUBING END. IF THE TUBING

HAS A BEND OR OFFSET WITHIN 1/4 INCH OF THE WELD, MEASURE AS FOLLOWS: IDENTIFY THE DIRECTION OF THE OFFSET IN THE TUBING. TAKE MEASUREMENT FROM A STRAIGHTLINE AS IF THE TUBING WAS UNBENT.

USING

A

STRAIGHTEDGE, MEASURE ONE INCH ALONG THE TUBING IN A STRAIGHTLINE AXIS FROM THE INTERFACE WHERE THE TUBING MEETS THE WELD. IT MAY HELP TO REST THE END OF THE STRAIGHTEDGE AGAINST THE TUBING NUT. USE

A SECOND STRAIGHTEDGE PERPENDICULAR TO THE FIRST STRAIGHTEDGE AT THE

ONE INCH MARK FROM THE WELD. MEASURE THE DISTANCE FROM THE STRAIGHTEDGE TO THE OUTSIDE SURFACE OF THE TUBING WITH THE OFFSET.

THE DISTANCE SHALL NOT EXCEED 1/4 INCH AT ONE INCH FROM THE WELD.

IF THE OFFSET OR BEND EXCEEDS 1/4 INCH, THE TUBING ASSEMBLY REQUIRES

REPLACEMENT.

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5) BENDS TIGHTER THAN MINIMUM BEND RADIUS OF 1-1/4 INCH ANYWHERE ALONG THE TUBING ASSEMBLY, AS MEASURED ON THE TUBING CENTERLINE,

REQUIRE A DFS UNTIL THE TUBING IS REPLACED.

6) EVIDENCE OF CRIMPED, KINKED OR BULGING TUBING OR TUBING BENDS IS CAUSE FOR REPLACEMENT.

4. THIS ADVISORY IMPACTS TECHNICAL MANUALS AND PMS. TECHNICAL MANUALS (REFS E THROUGH J, AND REF N) WILL BE MODIFIED TO REFLECT THE REQUIREMENTS IN PARAGRAPH 3 OF THIS ADVISORY; TMDER TRACKING NUMBERS N65540-11-JC05, N65540-11-JC06, N65540-11-JC07, N65540-11-JC08, N65540-11-JC15, N65540-11-JC16 AND N65540-11-JC09 APPLY RESPECTIVELY TO REFS E THROUGH J, AND REF N. PMS (REFS K THROUGH M)

WILL BE MODIFIED TO REFLECT THE REQUIREMENTS IN PARAGRAPH 3 OF THIS

ADVISORY; PMS SPECIAL PROJECT NUMBER PS-7808-11 APPLIES. THIS ADVISORY HAS NO IMPACT TO OSS, SUPPLY SUPPORT/APLS, LIFE CYCLE TRAINING OR CLASS MAINTENANCE PLANS. AN UPDATE TO THIS ADVISORY WILL

BE ISSUED WITHIN 6 MONTHS PROVIDING THE STATUS OF THESE CHANGES.

5. THIS ADVISORY, ALONG WITH EXAMPLE PICTURES/DRAWINGS, WILL BE POSTED TO SAILOR TO ENGINEER

WEBSITE: HTTPS: <DOUBLE FORWARD SLASH>HELP.PHDNSWC.NMCI.NAVY.MIL.

ACCESS TO THE SAILOR-TO-ENGINEER WEBSITE CAN BE REQUESTED AT PAGE 07 RUEOMFB2557 UNCLAS

HTTPS:<DOUBLE FORWARD SLASH>ACCOUNTS.PHDNSWC.NMCI.NAVY.MIL.

6. NSWCCD POC FOR THIS MESSAGE IS MARK HAMPSON, CODE 668, DSN 443-1257, COMM (215)897-1257, E-MAIL: MARK.HAMPSON@NAVY.MIL.

ALTERNATE POC IS JOSEPH WESTENBERGER, CODE 668, DSN 443-1252, COMM

(215)897-1252, E-MAIL: JOSEPH.WESTENBERGER@NAVY.MIL.

7. PER REF M, THE NAVSEA TWH FOR FIRE PROTECTION SYSTEMS CONCURS WITH THIS ADVISORY.

8. REQUEST TYCOMS PASS THIS ADVISORY TO ALL APPLICABLE UNITS.//  
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